

*On some new and imperfectly-known Exotic Simple Ascidia.*

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The author has submitted the exotic simple Ascidians of the Zoological Museum of Vienna to a revision, the results of which are as follows:—Of the eighteen species described by him ten are new. Of the others some have been very imperfectly described, or at least there was room for remarks and observations tending to complete our knowledge of them. Of the new species the following appear to be particularly interesting on account of their remarkably formed hypophysial tubercles — *Microcosmus Herdmani* and *Cynthia Roretzii*. In both the tubercle consists of two cones inclined towards each other at an obtuse angle, upon which the ciliated groove is spirally twisted. In *Cynthia Roretzii* the ciliated canal bears teeth, which fit into opposite spaces. A similar tubercle is figured in *Cynthia præputialis*, Heller. A transition from the usual arrangement of the ciliated canals of the tubercles in the same plane towards that above described is shown by *Polycarpa rugosa*, sp. n. The tubercle of *Polycarpa sulcata*, Herdm., has a remarkable form; in it there occur numerous crateriform apertures of the hypophysial canal, reminding one of similar conditions in *Ascidia mamillata*. In *Chelyosoma productum*, Stimpson, a species remarkable for the abundance of its musculature, all the peculiarities of the hypophysial organ described by Julin were again met with.

The new species *Microcosmus Julinii* and *Cynthia mauritiana* are distinguished by spicules both in the test and the mantle. The latter species is closely allied to *Cynthia pallida*, Herdm. *Cynthia sacciformis*, sp. n., contains peculiar spicules, resembling those of *Culeolus*, Herdm. Spicules were also detected in *Boltenia pachydermatica*, Herdm.

A new *Cynthia* (*C. mirabilis*) is particularly interesting. Its branchial and cloacal apertures are placed at the opposite ends of the ovate body. The remarkable distribution of the musculature and the peculiar position of the digestive and generative organs caused by the abnormal position of the apertures seem to the author to furnish characters which, in the event of the discovery of other similar species, may justify the establishment of a new genus. *Cynthia nodulosa*, sp. n., is distinguished by an enormous annular muscle situated at the base of the siphons, as also by the spinosity of the ring-membrane. *Cynthia castaneiformis*, sp. n., which in external aspect resembles *C. echinata*, is remarkable for a branchial sac, the inner longitudinal vessels of which only embrace between them three large circular stigmata. *Corella novare*, sp. n., very closely approaches *C. eumyota*, Traustedt, from which species it is distinguished by its differently formed hypophysial tubercle and the great number of tentacles.—*Anzeiger der k. k. Akad. der Wiss. in Wien*, March 20, 1884, pp. 66, 67.